

US-PAT-NO: 6319600  
 DOCUMENT-IDENTIFIER: US 6319600 B1  
 TITLE: Fluoropolyether topcoat lubricants  
 DATE-ISSUED: November 20, 2001

## INVENTOR-INFORMATION:

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Falcone; Samuel John	San Jose	CA	N/A	N

## ASSIGNEE INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Seagate Technology LLC	Scotts Valley	CA	N/A	N/A

APPL-NO: 09/ 082967

DATE FILED: May 22, 1998

PARENT-CASE:

## RELATED APPLICATION

This application claims priority from provisional patent application Ser. No. 60/053,840 filed Jul. 25, 1997, entitled "FRACTIONATED NONFUNCTIONAL PERFLUOROPOLYETHERS FOR LUBRICATION OF LOW ROUGHNESS MEDIA AT LOW LUBRICANT THICKNESS" the entire disclosure of which is herein incorporated by reference.

INT-CL: [07] B01D003/00, B32B027/00, G11B005/00

US-CL-ISSUED: 428/336, 428/421, 428/422, 428/694TF, 203/99

US-CL-CURRENT: 428/336, 203/99, 428/421, 428/422, 428/694TF

FIELD-OF-SEARCH: 428/694TF; 428/921; 428/422; 428/336; 203/99

## REF-CITED:

## U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME
5292585	March 1994	Ohnuki et al.
<u>5562965</u>	October 1996	Gui et al.
<u>5741577</u>	April 1998	Yamamoto et al.
<u>6099937</u>	August 2000	Gui et al.

## OTHER PUBLICATIONS

Del Pesco, T., "Perfluoroalkylpolyethers", CRC Handbook of Lubrication and Tribology, vol. III, Bosser, E.R., Ed., CRC Press, Boca Raton, Florida, U.S., 1994, pp. 287-303.

L. H. Sperling, Introduction to Physical Polymer Science, 2nd Ed., pp. 78-79, 1992.

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DERWENT-ACC-NO: 2001-622136  
DERWENT-WEEK: 200228  
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TITLE: Rewritable optical disk  
header section whose hei  
land

----- KWIC -----

Basic Abstract Text - ABTX (1):  
NOVELTY - The disk has a header section who  
of the land.

Basic Abstract Text - ABTX (3):  
ADVANTAGE - Timing of signal is effectively  
and land because of their height differences.

Title - TIX (1):  
Rewritable optical disk for use with compu  
height is different from that of land

Standard Title Terms - TTX (1):  
REWRITING OPTICAL DISC COMPUTER HEADER SEC



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(19) United States  
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(54) OPTICAL RECORDING MEDIUM

Publication Classification

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(51) Int. Cl.<sup>7</sup> G11B 3/08  
(52) U.S. Cl. 359/272

(57) ABSTRACT

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An optical recording medium comprising at least a land and  
a groove where information-recording/reproducing is car-  
ried out by a flying type optical head. The optical recording  
medium keeps the flying height of the flying optical head  
constant in the entire region of the recording/reproducing  
area, and is provided with at least one characteristic among  
the following characteristics: RP which is dependent on land  
and groove parameters and the flying height satisfies the  
relation of  $10 \cdot RP \leq 0.1H$ ; centerline mean roughness  $R_a$  is in  
the range of 0.2 nm  $R_a$  2.0 nm, and the layer thickness of a  
liquid lubricant layer satisfies the relation of  $t \leq R_a$ ; the  
relation of  $\Delta RP \leq \lambda/16NA$  which is dependent on the effec-  
tive numerical aperture, laser wavelength and surface  
parameters is satisfied where all parameters in the formula  
are defined in the specification; and the height of a header  
area is different from the height of a land portion.

(21) Appl. No.: 09/777,586

(22) Filed: Feb. 7, 2001

(30) Foreign Application Priority Data

Feb. 6, 2000 (JP) JP 2000-035653  
Mar. 3, 2000 (JP) JP 2000-063375  
Mar. 31, 2000 (JP) JP 2000-101309  
Jun. 6, 2000 (JP) JP 2000-174217

